

Remarks/Arguments:

Claims 1-79 are pending in the application. Claims 12-52 and 64-79 are allowed.

The Examiner objects to Claims 3, 53, 55, and 64 because of specific informalities.

Claims 3, 53, 55, and 64 are amended to overcome the Examiner's objections.

Claims 1, 3-8, 53, and 55-60 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,867,878 to Foster et al. in view of U.S. Patent No. 6,690,987 to Baudry et al. Claims 2 and 54 stand rejected under U.S.C. 103(a) as being unpatentable over Foster et al. in view of Baudry et al., and further in view of U.S. Patent No. 6,259,526 to Pace et al. Claims 9-11 and 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al. in view of Baudry et al., and in further view of Foster et al.

Applicant appreciates the courtesies extended to Applicant's counsel during a telephone interview on April 11, 2005. The substance of that interview is as follows:

1. The interview did not include any exhibits or demonstrations.
2. Independent Claims 1 and 53 were discussed.
3. The prior art discussed included U.S. Patent No. 5,867,878 to Foster et al., U.S. Patent No. 6,690,987 to Baudry et al., and U.S. Patent No. 6,259,526 to Pace et al.
4. Applicant's counsel proposed to amend the claims to clarify the location where a digital image of the moving fabric web is obtained.
5. A discussion of the prior art is provided below.
6. No other pertinent matters were discussed.
7. Applicant will file a Reply consistent with the interview.

Applicant's Invention

Applicant's invention is directed to a system for controlling the width and stitch density of a moving fabric web that overcomes the problems with prior art control systems. In particular, and as described in Applicant's specification (Page 4, Lines 3-9), it has been found that width measurements taken at the exit of a moving fabric from the compaction chamber are not indicative of the measurement of the final web width. More specifically, the inventors have now found that cooling, pulling, and vibration of the compacted fabric web as the web moves up a fabric conveyor for folding, produce a fabric having a different, unexpected width. One aspect

of Applicant's invention, therefore, is to mount a digital camera so that the camera can capture digital images of the moving fabric at a preselected position on the fabric conveyor, instead of at the exit of the compaction chamber. Claims 1, 12, 28, 53, and 64, as amended, further clarify this location. Further, the CCD camera is mounted a sufficient height above the fabric so that the entire width of the moving fabric web is within the camera's field of view.

A controller directs the frequency with which the camera captures digital images of the moving fabric web. Each captured image is transmitted to and received by the controller as a digital representation for analysis by a vision processor. Installed software has pattern matching capability to analyze the captured images. Additionally, the processor of the controller is programmed to measure the light level of the fabric based upon the light reflected from the fabric. An algorithm continually adjusts the shutter speed of the camera so that the captured image is properly exposed and the opposed side edges of the moving fabric web are discernable. Thus, regardless of the lighting conditions, or the color or shade of the fabric, a suitable image is captured.

The Prior Art is Different

It is the burden of the Examiner to establish a prima facie case of obviousness when rejecting claims under 35 U.S.C. §103. In re Reuter, 651 F.2d 751, 210 USPQ 249 (CCPA 1981). The CAFC (and the CCPA before it) have repeatedly held that, absent a teaching or suggestion in the primary reference for the need, arbitrary modifying of a primary reference or combining of references is improper. The ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). In re Gieger, 815 F. 2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

The prior art is different. Foster et al. is also directed to a fabric width control system. However, as shown in Figure 1 and as described in the specification, Foster et al. teaches a system having a camera that is mounted and configured to view a moving fabric web as the web exits the compaction chamber. Foster et al. does not obtain an image of the fabric web at a preselected position on the fabric conveyor, as does Applicant's invention, and as claimed in Claims 1, 12, 28, 53, and 64, as amended. Foster et al. also does not disclose that the image obtained by the camera is of the entire width of the web. As the Examiner correctly states,

Foster et al. also does not disclose that a controller receives the captured image of the preselected portion of the moving web from the camera to calculate the width of the web from the image.

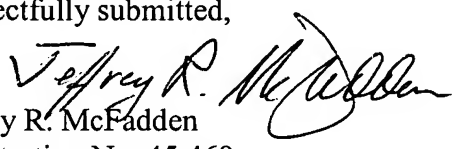
The Examiner proposes to modify Foster et al. with Baudry et al. with respect to a controller receiving a captured digital image and calculating a fabric width using the captured image. The applicant respectfully disagrees. Rather, Baudry et al. is directed to an entirely different type of apparatus wherein the width and "position" of a textile sheet are controlled based upon input from a "detector" 126 that is comprised of two sensors 128a, 128b. Each sensor is mounted to detect one of the longitudinal edges of the textile sheet. While Baudry et al. suggests that a digital camera might be used as a detector, Baudry et al. does not disclose that such a camera would "capture" an image, does not disclose that a controller receives a captured image (digital representation), and does not disclose that a width is calculated based upon a captured digital image.

With respect to Applicant's controller determining the amount of light reflected from the fabric web, Applicant disagrees that Baudry discloses such a controller function. Even if Baudry et al. did receive a digital image and calculate a width, which it does not, determining the amount of light is not an "integral" process of interpreting the image. The Office Action states that the amount of reflected light varies as the width of the fabric web varies. That is not what Applicant's controller is determining; rather, as described above, the measured reflected light varies with lighting conditions, or the color or shade of the fabric, and not with changes in the web width.

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Amdt. dated April 11, 2005
Reply to Office Action of January 11, 2005

Applicant respectfully submits that the pending application is now in condition for an immediate allowance of all pending claims, and such action is requested. If any matter remains unresolved, Applicant's counsel would appreciate the courtesy of a telephone call to resolve the matter.

Respectfully submitted,


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I hereby certify that the documents identified above are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and are addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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